DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028376
Date Inspected: 11-Sep-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1930
Location: Job Site

CWI Name:	Fred Michels and Cris Concha			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

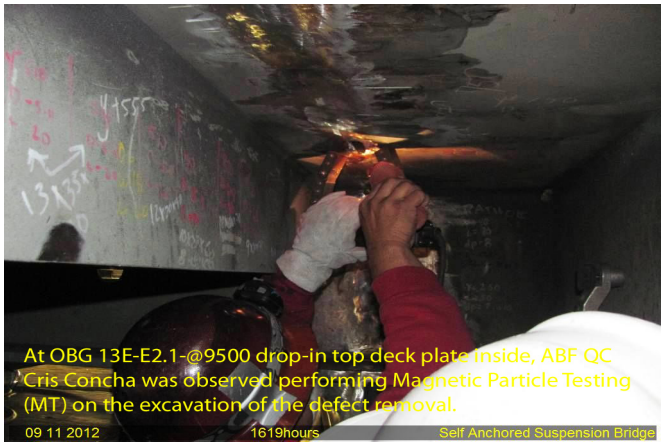
At OBG 13E-E2.1-@9500 drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Rick Clayborn continuing to perform CJP groove welding repair on a Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded splice butt joint. The welder preheated the repair area and its vicinity to >225°F using propylene gas torch prior excavation and then ground smooth the groove of the excavation. After its completion, ABF QC Cris Concha performed Magnetic Particle Testing (MT) on the removal of the defects with no relevant defect noted during the test. This QA also performed same test verification with same result noted.

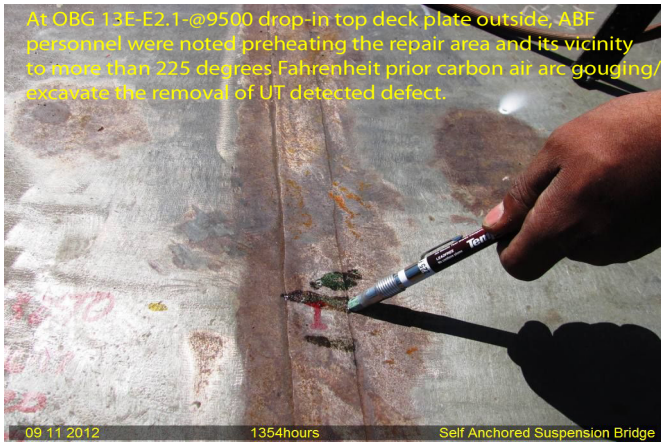
ABF personnel were noted using propylene gas torch to preheat the repair area and its vicinity to 325°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder Rick Clayborn was observed manually welding in 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1004 Repair. Welder Rick Clayborn was noted welding five (5) first time and two (2) second time repairs at various Y locations listed below. During welding, ABF QC Fred Michels was noted monitoring the welder from the inside while Cris Concha was noted monitoring the welders' welding parameter from the outside with measured working current of 136 amperes on the 3.2mm diameter E7018H4R electrode. Since the two (2) second time repairs need an approved Request for Weld Repair (RWR) prior to commence the repair, this QA has

informed ABF QC Cris Concha about the need for the RWR prior repair. Also, according to ABF QC Fred Michels he had informed the welder that the two such repair still awaiting Caltrans approval. Despite this notice given by the QC to the welder forewarning him not to proceed with the two repairs, the welder performed the two repairs and completed them during the shift without the approved RWR. Since this was in violation to the procedure per contract documents, this QA issued an Incident Report. Each time the welder has completed one repair, an ABF personnel was noted performing the post weld heat treatment (PWHT) using the propylene gas torch and verifying the heat using the 450°F for one hour as required. Another ABF personnel were also noted continuously preheating the repair area and its vicinity to 325°F as the welder goes to another repair. ABF welder Rick Clayborn has completed from inside the first and second time repairs listed below;

Y-location Length Width Depth RWR# Remarks

1. 8050mm 50mm 20mm 9mm N/A R1- completed.
2. 3240mm 150mm 20mm 12mm N/A R1- completed.
3. 2650mm 70mm 20mm 8mm Required R2 – completed.
4. 2120mm 50mm 20mm 5mm N/A R1- completed.
5. 1210mm 40mm 20mm 8mm Required R2 – completed.
6. 1075mm 100mm 15mm 9mm N/A R1- completed.
7. 3590mm 50mm 20mm 10mm N/A R1- completed.





Summary of Conversations:

Since the two (2) second time repairs at OBG 13E-E2.1-@9500 need an approved Request for Weld Repair (RWR) prior to commence the repair, ABF QC Fred Michels had informed the welder that the two such repair still awaiting Caltrans approval. Despite this notice given by the QC to the welder, forewarning him not to proceed with the two repairs, the welder performed the two repairs and completed them during the shift without the approved RWR. Since this was in violation to the procedure per contract documents, this QA issued an Incident Report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer